Appendix I. Monitoring Plan

Resource Assessed	Monitoring Question/Objective	Frequency	Field Method/Data Collection	Documentation Format	Primary Responsibility
Water Quality & Soil Productivity	Are applicable Best Management Practices (BMPs) being implemented according to Forest Plan Standards for Timber Sale activities?	During operational periods of ground disturbing management activities.	Evaluate implementation of Best Management Practices – timber sale contract provisions, National Best Management Practices, GA Forestry Best Management Practices.	Timber Sale field inspection forms, National BMP protocols, GA Forestry BMP field audits	Timber Sale Administrator & Harvest Inspector, Forest Service Representative (FSR), Forest Natural Resources staff, GA Forestry Commission water quality staff
Water Quality & Soil Productivity	Are applicable Best Management Practices effective in meeting Forest Plan standards for water quality and soil productivity? Were identified sources of sediment addressed?	During operational periods and within 6 months to 1 year after operations end.	Field evaluation of the effectiveness of BMPs to meet Forest Plan standards. Random sample of harvest units, roads, and firelines following ground disturbance using line transects & point samples.	National Best Management Practices protocols, Forest Plan monitoring items	Forest Service interdisciplinary team members as applicable
Implementation of Best Management Practices to current standards	Were Best Management Practices implemented per Best Management Practices for Forestry in Georgia; and Forest Service National Best Management and effective in protecting water quality and soil productivity?	During operational periods and within 6 months to 1 year after operations end.	Field evaluation of randomly selected harvest units and prescribed burns by Georgia Forestry Commission water quality personnel.	Completion of GFC Best Management Practice Audit Form, filed in state database	Georgia Forestry Commission Water Quality personnel

Resource Assessed	Monitoring Question/Objective	Frequency	Field Method/Data Collection	Documentation Format	Primary Responsibility
Fisheries and Aquatic Habitats	Are Forest Plan standards effective in protecting fish and aquatic resources?	Periodic reconnaissance check after road and harvest activities.	Check for stream passage or habitat issues by sampling fish or other aquatic organisms within three years of project implementation.	Inspection report with findings and recommendations	Forest Fisheries Biologist
Revegetation of Disturbed Areas	Were the prescribed revegetation efforts on disturbed sites such as roads, skid trails, landings, and firelines implemented and effective in establishing ground cover and erosion protection?	Within one growing season of re-vegetation operations.	Field visual evaluation of disturbed areas that have been re-vegetated to ensure re-vegetation is successful.	Field visual inspection of random sample of re-vegetated areas	Timber Sale Administrator, Fire Management Officer, Wildlife Biologist, Forest Natural Resources staff, and other project managers as needed
Threatened and Endangered Plants	Are timber sale and road reconstruction contract provisions being implemented to protect the Small Whorled Pogonia population during activities?	Prior to timber sale layout and road reconstruction layout.	Field inspection to ensure area is flagged to keep equipment off plants and to preserve the light regime in the population.	Inspection report of findings	District Wildlife Biologist

Resource Assessed	Monitoring Question/Objective	Frequency	Field Method/Data Collection	Documentation Format	Primary Responsibility
Non-Native Invasive Plants	Are NNIS "pre-disturbance" treatments required, for example treating treating NNIS along roadside proposed for daylighting? If treatments were required, were they effective in eliminating NNIS?	Prior to Treatment (disturbance), and after NNIS treatment (if needed)	Field inventory / Forest Service NNIS Efficacy Treatment protocol.	Report findings to appropriate District Staff	Qualified Forest NNIS specialists, including District Biologist, District Wildlife Technician and/or Forest Botanist
Non-Native Invasive Plants	Are design criteria to limit the spread of NNIS plants effective?	1-2 field seasons after activities have been completed	Field inspections using established FS protocols to identify establishment or spread of NNIS along high risk habitats and adjacent areas (fire line, roads, trails, log landings, skid trails, wildlife openings etc.).	Report findings to appropriate District Staff	District Timber Staff, District Wildlife Biologist
Non-Native Invasive Plants	Have project activities contributed to the spread of NNIS?	1, 3 and 5 years Post Treatment (disturbance)	Field inventory	Report findings to appropriate District Staff	Qualified Forest NNIS specialists, including District Biologist, District Wildlife Technician and/or Forest Botanist

Resource Assessed	Monitoring Question/Objective	Frequency	Field Method/Data Collection	Documentation Format	Primary Responsibility
Fire and Fuels	Was prescribed burn implemented in a manner to mitigate unnatural fire effects within riparian zones and north slopes, i.e., were north slopes and riparian corridors burned?	Immediate post burn, with follow up as needed.	Field Evaluation	Report Findings to District Fire and Wildlife Staff	District Fire Management Officer, District Wildlife Biologist
Fire and Fuels	Did the prescribed burn accomplish prescribed burn objectives, including creating Early Successional Habitat, Restoring Woodlands and establishing desired oak regeneration in the understory? If desired habitat was achieved, to what extent? And, is another burn rotation needed?	Post burn monitoring 1 and 3 years post burn, for each burn rotation.	Transects distributed across burn unit boundary; GPS mapping; LiDAR analysis at completion of project.	Report Findings to District Fire, Timber and Wildlife Staff	District Fire Management Officer, District Wildlife Biologist
Recreation	Have effects to the Duncan Ridge Trail and other Recreation Sites been mitigated according to Required Mitigation Measures?	Pre and Post Disturbance	Field Evaluation	Report Findings to District Fire, Timber and Wildlife Staff	District Other Resource Assistant (ORA)

Resource Assessed	Monitoring Question/Objective	Frequency	Field Method/Data Collection	Documentation Format	Primary Responsibility
Heritage	Were project specific mitigations effective in protecting cultural and heritage resources?	During and immediately after vegetation management and prescribed burning activities.	Field inspections of sites to ensure the protection or avoidance of heritage resources.	Inspection report of findings	Timber Sale Administrator, Archeologist, District Ranger
Engineering	Are Forest Standards and Road BMPs for construction, maintenance and management being followed and effective for safety and efficiency, and sufficiently addressing resource issues such as fish passage and water quality?	During and following construction, decommissioning activities, after major flood events and ongoing every 3-5 years.	Field inspection of road system and management activity during and following actions.	Inspection report with findings and recommendations	Forest Engineer, Forest Natural Resources staff
Vegetation Management (regeneration)	Were silvicultural regeneration treatments successful in regenerating oak?	1st and 3rd year regeneration/survival surveys	100th acre plots according to Forest Service manual.	Report Finding to Timber staff, document results in Forest Service database	District Timber Staff